

PRACTICE EXAM 13 QUESTION (1 -50)

1. A trench is being excavated in Type B soil to a depth of 22 feet. The competent person must select an appropriate protective system for this excavation. Which requirement applies at this depth?

- A. A protective system is optional because the soil is cohesive
- B. Sloping at a maximum allowable angle of 1:1 horizontal to vertical
- C. An engineered protective system designed by a registered professional engineer
- D. Benching the trench walls in a single four-foot lift per side

2. A contractor is preparing a bid and must account for the cost of labor burden in addition to base wages. Which of the following is correctly classified as a labor burden cost?

- A. Employer payroll taxes, workers' compensation, and fringe benefits
- B. The cost of materials delivered to the project site
- C. Equipment rental fees charged on a monthly basis
- D. Subcontractor markups added to the final bid price

3. Under OSHA construction standards, at what height must workers on a walking/working surface with an unprotected edge be protected from falling?

- A. 4 feet above a lower level
- B. 10 feet above a lower level
- C. 8 feet above a lower level
- D. 6 feet above a lower level

4. In Georgia, a general contractor license is required from the State Licensing Board when a contract for residential or commercial work exceeds what threshold amount?

- A. \$1,000
- B. \$2,500
- C. \$5,000
- D. \$10,000

5. A construction contract includes a liquidated damages clause. For such a clause to be enforceable rather than treated as an unenforceable penalty, the stipulated amount must be what?

- A. Equal to twice the contractor's anticipated profit on the project
- B. A reasonable forecast of actual damages that are difficult to estimate
- C. The maximum amount the owner could recover under any circumstance
- D. An amount set arbitrarily high to ensure on-time project completion

6. A contractor's current ratio is calculated by dividing current assets by current liabilities. A ratio of 2.0 generally indicates what about the company's financial position?

- A. The company is operating at a net loss for the period
- B. The company has too much debt relative to its equity
- C. The company's revenues exceed its total expenses
- D. The company has adequate short-term liquidity to meet obligations

7. OSHA requires that supported scaffold platforms be fully planked. The space between the platform edge and the face of the structure being worked on generally must not exceed what distance?

- A. 14 inches for most work
- B. 36 inches for most work
- C. 24 inches for most work

D. 6 inches for most work

8. On a set of architectural plans drawn at a scale of $1/4" = 1'-0"$, a wall that measures 3 inches on the drawing represents an actual length of how many feet?

- A. 3 feet
- B. 6 feet
- C. 12 feet
- D. 24 feet

9. Under Georgia lien law, a subcontractor or materialman must file a claim of lien within what time period after the materials or labor were last furnished to the project?

- A. 90 days after the last work or materials were furnished
- B. 30 days after the last work or materials were furnished
- C. 6 months after the last work or materials were furnished
- D. 1 year after the last work or materials were furnished

10. Under OSHA's Hazard Communication Standard, what document must a manufacturer provide that details the properties, hazards, and safe handling of a chemical product?

- A. A material inventory log maintained by the employer
- B. A written respiratory protection program for the site
- C. A confined space entry permit signed by a supervisor
- D. A safety data sheet for each hazardous chemical

11. When pricing a job, a contractor allocates general overhead costs. Which of the following is an example of a general (indirect) overhead expense rather than a direct job cost?

- A. Concrete and rebar installed in the project foundation

- B. Office rent and administrative staff salaries
- C. Wages paid to carpenters working on the project
- D. A crane rented specifically for one project lift

12. In a Critical Path Method (CPM) schedule, the critical path is best defined as which of the following?

- A. The sequence of activities with the greatest amount of float
- B. The path containing the most expensive project activities
- C. The longest sequence of activities determining project duration
- D. The path that includes all subcontractor-performed activities

13. On a construction site, OSHA requires GFCIs or an assured equipment grounding conductor program primarily to protect workers from what hazard?

- A. Arc flash burns from high-voltage transmission equipment
- B. Overloading of temporary branch circuits and conductors
- C. Electric shock from ground faults in portable equipment
- D. Fire caused by improperly rated overcurrent protection

14. Under the International Building Code, a building used as a retail store with merchandise displayed for sale to the public is classified under which occupancy group?

- A. Group M, Mercantile
- B. Group B, Business
- C. Group A, Assembly
- D. Group S, Storage

15. In Georgia, an employer is generally required to carry workers' compensation insurance once the business regularly employs how many workers?

- A. 1 or more employees
- B. 5 or more employees
- C. 10 or more employees
- D. 3 or more employees

16. During construction, the owner requests additional work not included in the original scope. The proper contractual mechanism to document the added work and adjust the price is which of the following?

- A. A submittal log entry approved by the architect
- B. A written change order signed by both parties
- C. A request for information sent to the design team
- D. A punch list item added at project closeout

17. A permit-required confined space has specific characteristics under OSHA. Which of the following is a defining feature of a permit-required confined space?

- A. It contains or may contain a hazardous atmosphere
- B. It is used for continuous employee occupancy daily
- C. It has at least two unobstructed means of egress
- D. It is located entirely above ground on the work site

18. A contractor wants a 20% gross profit margin on a job with direct costs of \$80,000. What should the selling price be to achieve a 20% margin (not markup)?

- A. \$96,000
- B. \$92,000
- C. \$88,000
- D. \$100,000

19. A contractor in Georgia must renew the general contractor license issued by the State Licensing Board on what cycle?

- A. Annually on December 31 each year
- B. Biennially, every two years
- C. Every four years from issuance
- D. Every three years from issuance

20. A personal fall arrest system (PFAS) using a full-body harness must limit the maximum arresting force on a worker's body to what value under OSHA?

- A. 900 pounds
- B. 1,200 pounds
- C. 1,800 pounds
- D. 2,500 pounds

21. Under the IBC, the minimum clear width of a means-of-egress door opening for most occupancies must be at least what dimension?

- A. 32 inches clear width
- B. 28 inches clear width
- C. 24 inches clear width
- D. 36 inches clear width

22. On a construction contract, the owner withholds a percentage of each progress payment until the project is satisfactorily completed. This withheld amount is commonly known as what?

- A. A performance bond premium held in escrow
- B. A contingency reserve for unforeseen conditions
- C. Retainage held to ensure completion of the work

D. Liquidated damages assessed for delayed completion

23. OSHA requires that a portable straight ladder used to access an upper landing extend a minimum distance above the landing surface. That minimum extension is what?

- A. 1 foot above the landing surface
- B. 2 feet above the landing surface
- C. 4 feet above the landing surface
- D. 3 feet above the landing surface

24. A contractor needs to pour a concrete slab measuring 30 feet by 30 feet at a thickness of 4 inches. Approximately how many cubic yards of concrete are required?

- A. About 8.3 cubic yards
- B. About 11.1 cubic yards
- C. About 15.0 cubic yards
- D. About 33.3 cubic yards

25. On a public construction project, a payment bond is required primarily to protect which party?

- A. Subcontractors and suppliers who furnish labor and materials
- B. The general contractor against owner nonpayment of the contract
- C. The project owner against contractor default on the work
- D. The surety company against losses from claims paid out

26. During excavation, OSHA requires that excavated material (spoil), equipment, and surcharge loads be kept a minimum distance from the edge of the trench. That minimum setback is what?

- A. At least 1 foot from the edge of the excavation

- B. At least 3 feet from the edge of the excavation
- C. At least 2 feet from the edge of the excavation
- D. At least 5 feet from the edge of the excavation

27. A Georgia contractor who purchases building materials to incorporate into a construction project is generally treated as the consumer of those materials for sales tax purposes. This means the contractor is responsible for what?

- A. Collecting sales tax from the property owner on materials
- B. Paying sales or use tax on the materials when purchased
- C. Remitting an excise tax on the total value of the contract
- D. Filing for an exemption certificate on all material purchases

28. In the construction process, a shop drawing is best described as which of the following?

- A. The original design drawings prepared by the project architect
- B. A revised drawing issued by the owner during construction
- C. A code-compliance drawing submitted to the building official
- D. A detailed drawing prepared by the fabricator or subcontractor

29. OSHA's respirable crystalline silica standard requires employers to limit worker exposure to silica dust. A common engineering control during concrete cutting is which of the following?

- A. Providing workers with loose-fitting cotton dust masks
- B. Increasing the speed of the cutting operation to finish faster
- C. Performing all cutting operations indoors with the doors closed
- D. Using water delivery (wet methods) to suppress dust at the source

30. Under the IBC, Type I construction is characterized primarily by what feature?

- A. Structural elements of noncombustible materials such as concrete and protected steel
- B. Exterior walls of noncombustible material with combustible interior framing throughout
- C. Wood-framed structural elements used throughout the entire building structure
- D. Any materials permitted by code with no fire-resistance rating required at all

31. A masonry crew lays brick at a rate of 150 bricks per hour. A wall requires 4,500 bricks. How many labor-hours are needed to complete the brickwork?

- A. 15 labor-hours
- B. 45 labor-hours
- C. 30 labor-hours
- D. 60 labor-hours

32. Under Georgia law, when a corporation holds a general contractor license, the license must be held through a designated individual who has passed the examination. This person is known as what?

- A. The registered agent of record for the corporation
- B. The qualifying agent for the licensed company
- C. The responsible managing officer of the board
- D. The certified project manager for the company

33. OSHA requires employers to record certain work-related injuries and illnesses. Which form is used to log each recordable injury or illness as it occurs throughout the year?

- A. OSHA Form 300, the Log of Work-Related Injuries and Illnesses
- B. OSHA Form 301, the annual summary posted for all employees
- C. OSHA Form 300A, the incident report for each individual case
- D. OSHA Form 174, the safety data sheet for chemical exposures

34. Under a cost-plus-fixed-fee contract, how is the contractor compensated?

- A. A single lump sum agreed upon before any work begins
- B. A fixed price per unit multiplied by the quantity installed
- C. The actual costs plus a fee that varies with total project cost
- D. The actual costs of the work plus a predetermined fixed fee

35. OSHA requires guardrail systems on supported scaffolds more than 10 feet above a lower level. The top rail of a scaffold guardrail installed under current standards must be at what height above the platform?

- A. 21 to 30 inches above the platform surface
- B. 30 to 36 inches above the platform surface
- C. 38 to 45 inches above the platform surface
- D. 50 to 60 inches above the platform surface

36. When calculating the occupant load of a space, the building code uses an occupant load factor expressed in what terms?

- A. The total number of exits required for the space
- B. Square feet of floor area per occupant
- C. The maximum travel distance to an exit door
- D. Cubic feet of air volume per person in the room

37. A contractor's working capital is calculated using which of the following?

- A. Total assets minus total liabilities of the company
- B. Current assets minus current liabilities of the company
- C. Net income divided by total shareholder equity
- D. Gross revenue minus the cost of goods sold

38. OSHA requires that a "competent person" inspect excavations. A competent person is defined as someone capable of identifying hazards and who has what additional authority?

- A. Authorization to take prompt corrective measures to eliminate hazards
- B. A professional engineering license issued by the state licensing board
- C. At least ten years of documented heavy construction field experience
- D. Certification as an OSHA outreach trainer for the construction industry

39. Under Georgia law, what is a potential consequence for a contractor who performs work requiring a license without holding one?

- A. The contractor receives a written warning with no further penalty
- B. The contractor must complete continuing education before being paid
- C. The contractor automatically qualifies for a probationary license
- D. The contractor may be unable to enforce the contract or collect payment

40. A contractor receives a unit-price contract for excavation at \$12 per cubic yard. If actual quantities total 850 cubic yards instead of the estimated 800, how much will the contractor be paid for the excavation?

- A. \$9,600 based on the original estimated quantity
- B. \$600 for the additional excavated material only
- C. \$10,200 based on the actual quantity excavated
- D. \$9,000 for a negotiated reduced unit rate

41. A worker is operating from a boom-type aerial lift (cherry picker). OSHA requires the worker to use what fall protection while in the elevated basket?

- A. A personal fall arrest or restraint system secured to the boom or basket
- B. A guardrail removed to allow freedom of movement during the task

- C. A safety monitor stationed on the ground watching the worker closely
- D. No fall protection because the basket itself provides adequate protection

42. Under the IBC, the maximum riser height and minimum tread depth for stairs in most occupancies are approximately what?

- A. Maximum 8-inch riser and minimum 9-inch tread depth
- B. Maximum 7-inch riser and minimum 11-inch tread depth
- C. Maximum 6-inch riser and minimum 12-inch tread depth
- D. Maximum 9-inch riser and minimum 10-inch tread depth

43. During construction, a contractor encounters a discrepancy between two sheets of the drawings. The appropriate formal method to obtain clarification from the design team is to submit what?

- A. A change order proposal sent directly to the project owner
- B. A shop drawing showing the contractor's own interpretation
- C. A request for information (RFI) to the design team
- D. A punch list noting the discrepancy for later resolution

44. Hard hats are classified by the protection they provide. A Class E hard hat is specifically designed to protect against what additional hazard?

- A. Impact from objects striking the top of the head only
- B. Penetration by sharp falling objects on the work site
- C. Chemical splash and corrosive material exposure to the head
- D. High-voltage electrical shock and burns up to 20,000 volts

45. To obtain a general contractor license in Georgia, an applicant must typically demonstrate which of the following in addition to passing the examination?

- A. A minimum of fifteen years of supervisory field experience
- B. Financial stability and acceptable credit, often via a financial statement
- C. Ownership of at least \$250,000 in heavy construction equipment
- D. Membership in a recognized national contractor trade association

46. OSHA's energy control (lockout/tagout) procedures are designed primarily to protect workers from what hazard?

- A. Unexpected startup or release of stored energy during servicing
- B. Exposure to airborne contaminants during welding operations
- C. Falls from elevated work platforms during maintenance tasks
- D. Electrical arc flash from energized overhead power lines

47. A contractor has fixed annual overhead of \$120,000 and earns an average gross margin of 25% on revenue. How much revenue must the contractor generate annually just to break even on overhead?

- A. \$150,000 in annual revenue
- B. \$300,000 in annual revenue
- C. \$480,000 in annual revenue
- D. \$600,000 in annual revenue

48. Under accessibility requirements, the maximum running slope of a ramp on an accessible route is generally limited to what ratio?

- A. 1:8 (one unit of rise per eight units of run)
- B. 1:6 (one unit of rise per six units of run)
- C. 1:20 (one unit of rise per twenty units of run)
- D. 1:12 (one unit of rise per twelve units of run)

49. In a construction contract, "substantial completion" is best defined as the point at which what has occurred?

- A. The work is sufficiently complete so the owner can occupy and use it as intended
- B. Every item on the contractor's final punch list has been fully corrected and approved
- C. The contractor has received final payment including all retainage previously withheld
- D. The architect has issued the very first progress payment certificate to the owner

50. The State of Georgia adopts statewide minimum construction standards. Which set of model codes forms the basis for Georgia's mandatory construction codes?

- A. The Uniform Building Code published in the western United States
- B. The International Code Council family of codes, including the IBC and IRC
- C. The National Building Code of Canada with Georgia state amendments
- D. A code developed independently by each individual Georgia county

ANSWER KEY WITH EXPLANATIONS

1. C — Excavations 20 feet deep or greater require a protective system designed by a registered professional engineer. Below 20 feet, tabulated data, sloping, shoring, or shielding may be used, but the 20-foot threshold triggers the mandatory PE design. At 22 feet, no other option is permitted on its own.

2. A — Labor burden is the added cost of employing a worker beyond base wages, including employer payroll taxes (FICA, FUTA, SUTA), workers' compensation premiums, and fringe benefits. Materials, equipment rental, and subcontractor markups are separate cost categories. Accurately estimating burden prevents underbidding labor.

3. D — OSHA 1926.501 requires fall protection for construction workers on walking/working surfaces with an unprotected edge 6 feet or more above a lower level. (The 4-foot rule applies to general industry, and 10 feet applies to scaffolds.) The 6-foot trigger is fundamental to construction fall-protection planning.

4. B — Georgia requires a state-issued general or residential contractor license for projects valued at \$2,500 or more. Work below that threshold generally does not require licensure. Knowing the dollar trigger is essential to avoid unlicensed-contracting exposure.
5. B — A liquidated damages clause is enforceable only when the sum is a reasonable pre-estimate of actual damages that would be difficult to calculate at the time of contracting. If the amount functions as a punishment rather than compensation, courts treat it as an unenforceable penalty. Reasonableness is the legal test.
6. D — The current ratio (current assets ÷ current liabilities) measures short-term liquidity. A ratio of 2.0 means the company has twice the current assets needed to cover current liabilities, indicating healthy ability to meet near-term obligations. It does not, by itself, reveal profitability or net income.
7. A — OSHA 1926.451 limits the gap between the front edge of a scaffold platform and the work face to 14 inches for most work. Wider gaps require guardrails or fall protection. The rule prevents workers and materials from falling through the opening.
8. C — At a scale of $1/4" = 1'-0"$, every quarter-inch on paper equals one foot. A 3-inch measurement contains twelve quarter-inches ($3 \div 0.25$), so it represents 12 feet. Correctly applying drawing scale is critical for accurate quantity takeoffs.
9. A — Under O.C.G.A. § 44-14-361.1, a subcontractor or materialman in Georgia must file a claim of lien within 90 days after labor or materials were last furnished. Missing this deadline forfeits the lien right. The 90-day clock runs from the last furnishing, not from the contract date.
10. D — The Hazard Communication Standard requires manufacturers and importers to supply a safety data sheet (SDS) for each hazardous chemical, detailing properties, hazards, handling, and emergency measures. Employers must keep SDSs accessible to workers. The SDS replaced the older MSDS format under GHS.
11. B — General (indirect) overhead supports the whole business but is not tied to any single job; examples include office rent and administrative salaries. Direct costs such as installed materials, project labor wages, and project-specific equipment are charged to a particular job. Allocating overhead correctly protects profit margins.

12. C — The critical path is the longest continuous sequence of dependent activities through a project, and it determines the shortest possible project duration. Activities on the critical path have zero float, so any delay to them delays the whole project. It is not defined by cost or by who performs the work.

13. C — GFCIs and the assured equipment grounding conductor program protect workers from electric shock caused by ground faults in portable tools and temporary wiring. A GFCI senses current imbalance and quickly cuts power. The requirement targets shock hazards rather than overloads or fire.

14. A — Under the IBC, buildings used for the display and sale of merchandise to the public are classified as Group M, Mercantile. Group B is for offices and services, Group A is assembly, and Group S is storage. Occupancy classification drives code requirements for egress, fire protection, and construction type.

15. D — Georgia requires employers who regularly employ three or more workers, including part-time employees, to carry workers' compensation insurance. Failure to provide coverage exposes the employer to civil and criminal penalties. The three-employee threshold is a frequently tested Georgia rule.

16. B — A written change order, signed by both the owner and contractor, is the proper instrument to document added or modified scope and to adjust the contract price and time. RFIs seek clarification, submittals transmit product data, and punch lists track incomplete items. Verbal change directives create disputes.

17. A — A permit-required confined space is one that, among other criteria, contains or has the potential to contain a hazardous atmosphere. Other qualifying hazards include engulfment potential, inwardly converging walls, or other recognized serious hazards. Continuous occupancy and multiple egress points describe non-permit spaces.

18. D — A 20% gross margin means cost equals 80% of the selling price, so $\text{price} = \text{cost} \div 0.80 = \$80,000 \div 0.80 = \$100,000$. By contrast, a 20% markup on cost would yield only \$96,000. Confusing margin with markup is a common and costly estimating error.

19. B — Georgia general contractor licenses issued by the State Licensing Board are renewed biennially, on a two-year cycle. Licensees must also meet continuing-education requirements to renew. Tracking the renewal cycle prevents inadvertent lapse of licensure.

20. C — A personal fall arrest system using a full-body harness must limit the maximum arresting force on the worker to 1,800 pounds. Body belts, which were limited to 900 pounds, are no longer permitted for fall arrest. Keeping arresting force within the limit prevents internal injury during a fall.

21. A — The IBC requires a minimum clear width of 32 inches for egress door openings in most occupancies, measured with the door open 90 degrees. This ensures adequate passage, including for accessibility. Door clear width is a core means-of-egress requirement.

22. C — Retainage is the portion of each progress payment the owner withholds (commonly 5–10%) until the work is satisfactorily completed, providing leverage to ensure performance. It is released at or near final completion. Retainage differs from bonds, contingencies, and liquidated damages.

23. D — OSHA 1926.1053 requires a portable ladder used to access an upper landing to extend at least 3 feet above the landing surface, giving the worker a secure handhold while stepping on or off. If extension is not possible, a grab rail must be provided. This rule prevents falls at the transition point.

24. B — The slab volume is $30 \text{ ft} \times 30 \text{ ft} \times 0.333 \text{ ft}$ (4 inches) = 300 cubic feet, divided by 27 cubic feet per cubic yard equals approximately 11.1 cubic yards. Converting thickness to feet before dividing by 27 is the key step. Accurate volume takeoffs prevent over- or under-ordering concrete.

25. A — A payment bond guarantees that subcontractors and suppliers who furnish labor and materials will be paid, protecting them when the general contractor fails to pay. A performance bond, by contrast, protects the owner against contractor default. On public projects, both bonds are commonly required.

26. C — OSHA 1926.651(j) requires that spoil piles, equipment, and other surcharge loads be kept at least 2 feet back from the edge of an excavation, or be restrained by retaining devices. This prevents material from rolling in and reduces edge collapse from added load. The setback protects workers inside the trench.

27. B — In Georgia, a contractor who buys materials to incorporate into real property is considered the final consumer of those materials and must pay sales or use tax at the time of purchase. The contractor does not collect tax from the owner on those materials. This treatment affects how material costs are estimated and recorded.

28. D — A shop drawing is a detailed drawing prepared by a fabricator, manufacturer, or subcontractor showing how a specific component will be made or installed. It supplements, but does not replace, the architect's design drawings and must be reviewed for conformance. Shop drawings translate design intent into fabrication detail.

29. D — Wet methods—delivering water to the cutting point—are a primary engineering control under OSHA's respirable crystalline silica standard, suppressing dust at its source. Loose cotton masks offer no rated protection, and cutting indoors without controls worsens exposure. Engineering controls are preferred over relying solely on respirators.

30. A — Type I construction consists of noncombustible structural materials such as reinforced concrete and protected structural steel, providing the highest fire-resistance ratings. It is used for high-rise and large-occupancy buildings. Combustible framing characterizes lower construction types such as Types III, IV, and V.

31. C — Dividing the total quantity by the production rate gives $4,500 \text{ bricks} \div 150 \text{ bricks per hour} = 30$ labor-hours. Production-rate calculations are the basis for labor estimating and scheduling. Accurate rates let a contractor price labor and plan crew size reliably.

32. B — In Georgia, a company that holds a contractor license does so through a qualifying agent—an individual who has passed the required examination and is responsible for the company's contracting work. The qualifying agent ties the firm's license to a competent person. This differs from a registered agent, who handles legal service of process.

33. A — OSHA Form 300 is the Log of Work-Related Injuries and Illnesses, where each recordable case is entered as it occurs during the year. Form 301 is the detailed individual incident report, and Form 300A is the year-end summary that must be posted. Knowing which form serves which purpose is essential for compliance.

34. D — Under a cost-plus-fixed-fee contract, the contractor is reimbursed for actual allowable costs plus a predetermined fixed fee that does not change with the final cost of the work. This removes the incentive to inflate costs that exists under cost-plus-percentage arrangements. The fixed fee provides the contractor's profit.

35. C — For scaffolds erected after January 1, 2000, OSHA requires the guardrail top rail to be between 38 and 45 inches above the platform. (The general fall-protection guardrail height is 42 inches, plus or minus 3 inches.) Proper rail height keeps the system effective at stopping a fall.

36. B — The occupant load factor is expressed as square feet of floor area per occupant and is used to calculate the design occupant load of a space. Multiplying area by the factor yields the number of people, which drives exit capacity. It is not a count of exits or a travel-distance measure.

37. B — Working capital equals current assets minus current liabilities and reflects the funds available for day-to-day operations. (Total assets minus total liabilities is net worth or equity.) Adequate working capital is critical for a contractor to fund payroll and materials between progress payments.

38. A — OSHA defines a competent person as one who can identify existing and predictable hazards and who has the authorization to take prompt corrective measures to eliminate them. Both the ability to recognize hazards and the authority to act are required. A PE license or trainer certification is not part of the definition.

39. D — In Georgia, performing work that requires a license without holding one can bar the contractor from enforcing the contract or collecting payment through the courts, in addition to fines and other penalties. Courts generally will not aid an unlicensed contractor in recovering payment. Licensure protects both the public and the contractor's right to be paid.

40. C — A unit-price contract pays for the actual measured quantity at the agreed unit rate: 850 cubic yards \times \$12 = \$10,200. The estimated quantity is used only for bidding; payment follows actual field measurements. This is the defining feature of unit-price contracting.

41. A — Workers in boom-type (extensible or articulating) aerial lifts must wear a personal fall arrest or travel-restraint system tied off to the boom or basket, because the basket can throw an occupant during movement. Scissor lifts, by contrast, rely on guardrails. Removing guardrails or using a ground monitor does not satisfy the requirement.

42. B — The IBC limits stair risers to a maximum of 7 inches and requires treads of at least 11 inches in most occupancies, balancing safe step proportions with usable space. Consistent riser and tread dimensions reduce trip hazards. These figures are commonly tested code values.

43. C — A request for information (RFI) is the formal method a contractor uses to obtain clarification from the design team when drawings conflict or details are unclear. The response becomes part of the project record. Change orders adjust scope and price, while RFIs resolve interpretation questions.

44. D — Class E (electrical) hard hats are designed to protect against high-voltage electrical shock and burns, tested up to 20,000 volts. Class G provides general protection to 2,200 volts, and Class C offers no electrical protection. Selecting the correct class is vital where electrical hazards exist.

45. B — Georgia applicants for a general contractor license must demonstrate financial responsibility, typically through a financial statement showing stability and acceptable credit, in addition to passing the exam. This protects the public from financially unstable contractors. Specific experience, equipment ownership, or trade membership are not the controlling requirement.

46. A — Lockout/tagout (energy control) procedures protect workers from the unexpected startup of equipment or the release of stored energy during servicing and maintenance. Energy sources are isolated and locked or tagged in the off position before work begins. The standard targets hazardous-energy release, not airborne contaminants or falls.

47. C — Break-even revenue for overhead equals fixed overhead divided by the gross margin: $\$120,000 \div 0.25 = \$480,000$. At that revenue, the 25% margin exactly covers the \$120,000 of overhead with no profit. Understanding break-even helps a contractor set realistic sales targets.

48. D — Accessibility standards limit the maximum running slope of a ramp on an accessible route to 1:12, meaning one inch of rise for every twelve inches of run. Steeper slopes are not permitted for accessible ramps, and a 1:20 or flatter slope is not even classified as a ramp. The 1:12 limit is a core accessibility requirement.

49. A — Substantial completion is the stage at which the work is sufficiently complete, in accordance with the contract documents, that the owner can occupy or use the project for its intended purpose. It typically triggers the start of warranty periods and may release a portion of retainage. Minor punch-list items can remain at this point.

50. B — Georgia adopts the International Code Council (ICC) family of model codes—including the International Building Code and International Residential Code—as the basis for its statewide minimum construction standards, with Georgia-specific amendments. This provides uniform requirements across the state. Individual counties may adopt additional appendices but build on the ICC base.